

APPLICANT(S): BIEBER, Avigdor  
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#### REMARKS

The present response is intended to be fully responsive to all points of objection and/or rejection raised by the Examiner and is believed to place the application in condition for allowance. Favorable reconsideration and allowance of the application is respectfully requested. Applicant asserts that the present invention is new, non-obvious and useful. Prompt consideration and allowance of the claims is respectfully requested.

#### Status of Claims

Claims 1 – 12 and 24 – 26 remain pending in the application.

Claims 1 – 12 and 24 – 26 were rejected in the March 8, 2007 Office Action. New claim 27 has been added herein. Applicants assert that no new matter has been added.

#### CLAIM REJECTIONS

##### 35 U.S.C. § 103 Rejections

In the Office Action, the Examiner rejected claims 1 – 12 and 24 – 25 under 35 U.S.C. § 103(a), as being unpatentable over Teng (US 6,242,156) in view of Crawford et al. (US 4,430,366).

In the Office Action, the Examiner rejected claims 1 and 26 under 35 U.S.C. § 103(a), as being unpatentable over Teng (US 6,242,156) in view of Crawford as evidenced by Nishida et al. (US 5,417,164).

Applicants respectfully traverse the rejection of claims 1 - 12 and 24 – 26 in view of the remarks that follow.

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According to M.P.E.P. § 2142, in order for a prima facie case of obviousness to be established, "three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991)"

In *KSR Int'l Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 1739 (2007), the Supreme Court emphasized the use of a "functional approach" in determining questions of obviousness. The operative question in this functional approach is "whether improvement is more than the predictable use of prior art elements according to their established functions." *Id.* Furthermore, the Court notes "where prior art teaches away from combining certain known elements, discovery of a successful means of combining them is more likely to be nonobvious." *Id.* Thus, even where elements are known in the prior art, where they work together in an unexpected manner, this supports a finding on non-obviousness. *Ex Parte Carolyn Ramsey Catan*, Appeal 2007-0820 (Board of Patent Appeals and Interferences, July 3, 2007).

Moreover, although the Court in KSR rejected rigid application of the "teaching, suggestion, or motivation test" in an obviousness inquiry, the Court acknowledged the importance of identifying "a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in a way the claimed invention does." *KSR*, 127 S. Ct. at 1731.

Therefore, as discussed more fully below, Claims 1-12 and 24-26 are not obvious.

Independent Claim 1 recites a lithographic printing member which includes a laser-absorbing layer which is a gradient solid dispersion of metal and metal-oxide

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areas such that concentration ratios between the metal and the metal-oxide vary throughout a thickness of said laser-absorbing.

The Office Action states that Teng does not teach that the radiation-sensitive layer is a gradient solid dispersion of metal and metal oxide areas and relies upon the teaching of Crawford in this respect. Applicants respectfully submit that this reliance is improper. Teng teaches away from a layer which is a gradient solid dispersion of metal and metal oxide areas, and Crawford, a reference not related to the art of printing plates, fails to rectify the deficiencies of Teng.

Teng mentions only the possibility of having a laser ablative layer consisting of metal oxide or alternatively a laser ablative metallic layer (see col. 10, lines 18 – 29). Teng does not disclose, teach or suggest in any way a layer which combines metal and metal-oxide and teaches away from such a layer, suggesting them only in the alternative.

Crawford fails to rectify the deficiencies of Teng. As stated by the Examiner, Crawford does not specifically teach that an aluminum/aluminum oxide may be used in printing plates. The Examiner, however, contends that it would have been obvious to one of ordinary skill in the art to use the aluminum/aluminum oxide composition of Crawford in the radiation-sensitive layer of Teng because the aluminum/aluminum oxide composition provides good adhesion of the substrate to the radiation-sensitive layers as taught by Crawford. It should be noted that the teaching of Crawford in this respect does not provide any reason that would have prompted a person of ordinary skill in the art of printing plates to combine it with the teaching of Teng in the manner claimed in claim 1.

In the field of printing plates, usually a metal or metal oxide layer functions as a laser absorbing ablative layer. As disclosed at column 3, lines 22 – 25 of Teng, an object of Teng's invention is "to provide laser ablative lithographic printing plate with no or low tackiness and good block resistance while maintaining excellent ablatability and press durability". This layer should preferably have good adhesion to the substrate. Still, it is well known in the art of printing plates that a layer comprising

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only metal or a layer comprising only metal-oxide, the two alternatives thought by Teng, would exhibit good adhesion.

Accordingly, the mere fact that Crawford teaches that metal and/or metal oxide layer provides good adhesion to the substrate does not provide a reason that would have prompted a person of ordinary skill in the art of printing plates to combine the teaching of Teng with Crawford to achieve the teaching of the present invention as recited in claim 1.

Moreover, It has been unexpectedly found by the applicants of the subject application that a laser-absorbing layer having "a gradient solid dispersion of metal and metal-oxide areas such that concentration ratios between the metal and the metal-oxide vary throughout a thickness of [the] laser-absorbing layer" improves the sensitivity of the printing plate to the laser energy and accelerates the imaging process as described in the specification at page 9, lines 7 – 11 as follows:

"The structure of the laser absorbing layer according to some embodiments of the present invention may accelerate the imaging process and may improve the sensitivity of the printing plate to the laser energy. Therefore, a printing plate structured according to some embodiments of the present invention may be exposed by a lower energy and/or may be exposed for shorter period of time than a standard printing plate" (emphasis added).

Teng fails to teach this element altogether, and Crawford fails to teach it as well, as it does not relate to the printing plates art.

Further, the Office Action contends that "[v]apor deposition by definition comprises dispersing the metal/metal oxide particles in an uneven distribution throughout the layer to form a gradient dispersion". Applicants respectfully disagree.

Vapor deposition "by definition" does not necessarily result in a gradient dispersion as alleged above. In contrast, a standard metal deposition process would not result in gradient solid dispersion of metal and metal-oxide areas, as claimed in

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claim 1. In order to achieve such a gradient of concentration throughout the thickness of the layer, the deposition process should be specifically pre-designed and the process should be carefully controlled. Further, different gradients may affect differently the efficiency of lithographic printing members and accordingly in practice a particular desired gradient may be chosen. This process is described in page 7 of the subject application as follows:

"The metal/metal-oxide layer may be deposited over base 102 using a metal vapor deposition process, in which a controlled amount of oxygen is introduced into the metal vapor stream to create the gradient solid deposition" (emphasis added).

Based on the discussion above, Applicants respectfully assert that neither Teng nor Crawford, either alone or in combination, discloses, teaches or suggests "*said laser-absorbing layer is a gradient solid dispersion of metal and metal-oxide areas such that concentration ratios between the metal and the metal-oxide vary throughout a thickness of said laser-absorbing layer*", as recited in claim 1. Therefore, the disclosures of Teng and Crawford do not render claim 1 obvious. Nishida et al. (US 5,417,164) cannot cure the deficiencies of the combination of Crawford, Teng and Nishida does not render claim 1 obvious. In view of the above, applicants respectfully submit that claim 1 is allowable.

Claims 2 – 12 and 24 - 26 depend directly or indirectly from claim 1, and thereby include all the limitations of claim 1 as well as additional distinguishing elements. Therefore, claims 2 – 12 and 24 - 26 are patentable for at least the reasons discussed above with regard to claim 1. In view of the above remarks, Applicants respectfully request that the above rejections of claims 1 – 12 and 14 – 26 under 35 U.S.C. § 103(a) be withdrawn.

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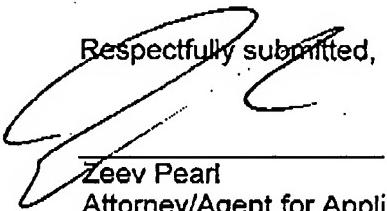
### CONCLUSION

In view of the foregoing amendments and remarks, the pending claims are deemed to be allowable. Their favorable reconsideration and prompt allowance is respectfully requested.

Should the Examiner have any question or comment as to the form, content or entry of this Amendment, the Examiner is requested to contact the undersigned at the telephone number below. Similarly, if there are any further issues yet to be resolved to advance this application to issue, the Examiner is requested to telephone the undersigned counsel.

Please charge any fees associated with this paper to deposit account No. 50-3355.

Respectfully submitted,

  
\_\_\_\_\_  
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Dated: August 7, 2007

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